

AMENDMENTS

In the Claims:

1. (Currently Amended) A virtualizing microarray system, said system comprising:
 - (a) a physical ~~catalog~~ microarray comprising:
 - (i) a number of features, each feature containing a type of probe molecule designed to bind a target molecule; and
 - (ii) a memory element physically associated with the physical catalog microarray, wherein said memory element comprising comprises data that describes each feature of the catalog microarray; and
 - (b) logic that generates a virtual microarray comprising data describing a subset of the features of the physical catalog microarray.

2. (Currently Amended) The virtualizing microarray system of claim 1 wherein the data describing a feature of the physical catalog microarray includes:
 - data that identifies a position of the feature within the physical catalog microarray;
 - data that identifies the type of probe molecules contained in the feature;
 - and
 - data that describes the target molecule of the probe molecules contained in the feature.

3. (Previously Presented) The virtualizing microarray system of claim 2 wherein the data that describes the target molecule of the probe molecules contained in the feature includes:
 - data that describes an immediate target molecule to which the probe molecules bind.

4. (Previously Presented) The virtualizing microarray system of claim 2 wherein the data that describes the target molecule of the probe molecules contained in the feature includes:

data that describes a biological molecule produced by synthesis directed by an immediate target molecule to which the probe molecules bind.

5. (Previously Presented) The virtualizing microarray system of claim 2 wherein the data that describes the target molecule of the probe molecules contained in the feature further includes:

data describing molecular function;
data describing a biological process; and
data describing a cellular component.

6. (Currently Amended) The virtualizing microarray system of claim 1 wherein the logic that generates a virtual microarray includes:

logic that allows specification of masks related to the data describing each feature of the **physical catalog** microarray; and

logic that uses the specified masks to filter the features of the **physical catalog** microarray to produce the data describing a subset of the features of the **physical catalog** microarray.

7. (Previously Presented) The virtualizing microarray system of claim 1, wherein said system comprises one of:

a microarray scanner;
a microarray-data processing system;
a microarray-data visualization system.

8. (Cancelled)

9. (Previously Presented) The virtualizing microarray system of claim 1 wherein the catalog microarray further includes a header that allows the logic to associate data describing each feature of the catalog microarray with a catalog microarray identified by information contained in the header.